

Flattened Stirling Permutations and Type B Set Partitions

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Recall that a Stirling permutation is a permutation on the multiset $\{1, 1, 2, 2, 3, 3, \dots, n, n\}$ such that any numbers appearing between repeated values of i must be greater than i . We call a Stirling permutation “flattened” if the leading terms of maximal chains of ascents (called runs) are in weakly increasing order. Our main result establishes a bijection between flattened Stirling permutations and type B set partitions of $\{0, \pm 1, \pm 2, \dots, \pm n - 1\}$. This readily implies that flattened Stirling permutations of order n are enumerated by the Dowling numbers.